

Harry I. Won

Curriculum Vitae

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EDUCATION

Harvard University

Cambridge, MA

Ph.D. Biological Sciences in Public Health, Graduate School of Arts and Sciences

2018 - Present, Concentration: Immunology and Infectious Diseases

University of Nebraska at Omaha

Omaha, NE

B.S. Biotechnology, Chemistry minor, College of Arts & Sciences

2014 - 2018, Graduated *summa cum laude* with Honors (GPA 4.00)

Honors Thesis: Investigation of bradyzoite differentiation initiation in *Toxoplasma gondii*

Advisor: Paul H. Davis

FUNDING

Herchel Smith Graduate Fellowship in the Sciences

Graduate School of Arts and Sciences, Harvard University

2018 - Present, \$191,000

IDEA Networks of Biomedical Research Excellence (INBRE) Fellowship - P20GM103427

National Institutes of Health and University of Nebraska at Omaha

2016 - 2018, \$18,500

Fund for Undergraduate Scholarly Experiences (FUSE) Grants

Office of Research and Creative Activity, University of Nebraska at Omaha

2017 - 2018, \$2,500

2016 - 2017, \$2,500

2015 - 2016, \$2,500

RESEARCH EXPERIENCE

University of Nebraska at Omaha

Omaha, NE

INBRE Scholar, Advisor: Paul H. Davis

2016 - 2018

Transcriptional regulation of genes involved in bradyzoite differentiation in *Toxoplasma gondii*;

Evaluation of a glutamic acid-rich protein knockout in *Toxoplasma gondii*;

Assembly of the burying beetle *Nicrophorus orbicollis* transcriptome

Undergraduate Research Assistant, Advisor: Paul H. Davis

2015 - 2016

Analysis of the Chilean pencil catfish *Trichomycterus areolatus* transcriptome

Undergraduate Research Assistant, Advisors: Mark A. Schoenbeck and Claudia M. Rauter

2014 - 2015

Investigation of genes involved in *Nicrophorus pustulatus* energy metabolism regulation

RESEARCH EXPERIENCE (continued)

University of Nebraska Medical Center

Omaha, NE

INBRE Summer Scholar, Advisors: Marat R. Sadykov and Kenneth W. Bayles

2016

Complementation of the Pta-AckA Pathway in *Bacillus anthracis*

PUBLICATIONS

1. **Won HI**, Schulze TT, Clement EJ, Watson GF, Watson SM, Warner RC, Ramler EAM, Witte EJ, Schoenbeck MA, Rauter CM, Davis PH. *De novo* Assembly of the Burying Beetle *Nicrophorus orbicollis* (Coleoptera: Silphidae) Transcriptome Across Developmental Stages with Identification of Key Immune Transcripts. *J Genomics* 2018; 6:41-52. PubMed PMID: 29707046; PubMed Central PMCID: PMC5916875
2. Schulze TT, Ali JM, Bartlett ML, McFarland MM, Clement EJ, **Won HI**, Sanford AG, Monzingo EB, Martens MC, Hemsley RM, Kumar S, Gouin N, Kolok AS, Davis PH. *De novo* Assembly and Analysis of the Chilean Pencil Catfish *Trichomycterus areolatus* Transcriptome. *J Genomics* 2016; 4:29-41. PMID: 27672404; PMCID: PMC5033730
3. Sack SA*, Watson SM*, **Won HI**, Davis PH, Rauter CM. Metabolic expression alteration in *Nicrophorus orbicollis* during obligate parental care. *In preparation*. *denotes equally contributing authors
4. Potluri LP*, **Won HI***, Watson GF, Warner RC, Sack SA, Zach SJ, Roos DS, Davis PH. A *Toxoplasma gondii* predicted glutamic acid-rich protein is essential for bradyzoite development and *in vivo* cystogenic ability. *In preparation*. *denotes equally contributing authors

PRESENTATIONS

1. **Won HI**, Potluri LP, Davis PH. Selective Activation of Early Bradyzoite Genes Drives *Toxoplasma gondii* Differentiation. Poster presented at the National IDeA Symposium of Biomedical Research Excellence, Washington, D.C. June 2018.
2. **Won HI**, Potluri LP, Davis PH. A Putative *Toxoplasma gondii* Transcription Factor Binding Site Drives Differentiation by Inducing Early Bradyzoite-specific Transcripts. Presented at the Nebraska Academy of Sciences Annual Meeting, Lincoln, NE. April 2018.
3. **Won HI**, Davis PH. Investigation of bradyzoite differentiation initiation in *Toxoplasma gondii*. Poster presented at the Spring 2018 UNO Honors Symposium, Omaha, NE. April 2018.
4. **Won HI**, Potluri LP, Davis PH. Gene Expression Modification Initiates Stage Conversion in *Toxoplasma gondii*. Presented at the Annual UNO Research and Creative Activity Fair, Omaha, NE. March 2018.
5. **Won HI**, Potluri LP, Davis PH. Putative Stage-specific Transcription Factor Binding Controls Life Cycle Progression in *Toxoplasma gondii*. Poster presented at the Annual NE-INBRE Conference, Nebraska City, NE. August 2017.
6. **Won HI**, Potluri LP, Davis PH. Bradyzoite Differentiation is Driven by Stage-specific Transcription Factor Binding in *Toxoplasma gondii*. Poster presented at the National Conference on Undergraduate Research, Memphis, TN. April 2017.
7. **Won HI**, Potluri LP, Davis PH. A Putative Stage-specific Transcription Factor in *Toxoplasma gondii* Controls Expression of Bradyzoite Genes. Presented at the Nebraska Academy of Sciences Annual Meeting, Lincoln, NE. April 2017.
8. **Won HI**, Potluri LP, Davis PH. Binding of a Hypothetical Transcription Factor Drives Stage Conversion in *Toxoplasma gondii*. Presented at the UNO Research and Creative Activity Fair, Omaha, NE. March 2017.

PRESENTATIONS (continued)

9. **Won HI**, Sadykov MR, Ahn JS, Widhelm TJ, Endres JL, Eckrich VM, Rutkowski GE, Wingerd KL, Bayles KW. Inactivation of the Pta-AckA Pathway Impairs Fitness and Sporulation of *Bacillus anthracis*. Poster presented at the International Conference on Gram-Positive Pathogens, Omaha, NE. October 2016.
10. **Won HI**, Sadykov MR, Bayles KW. Inactivation of the Pta-AckA Pathway Impairs Growth and Sporulation of *Bacillus anthracis*. Presented at the Annual NE-INBRE Conference, Nebraska City, NE. August 2016.
11. **Won HI**, Schoenbeck MA, Rauter CM. Identification and Cloning of Genes Involved in the Regulation of Energy Metabolism of Burying Beetles. Poster presented at the UNO Research and Creative Activity Fair, Omaha, NE. March 2016.
12. **Won HI**, Schoenbeck MA, Rauter CM. Identification and Cloning of Genes Involved in the Regulation of Energy Metabolism of Burying Beetles. Poster presented at the Ecological Genomics Symposium, Manhattan, KS. November 2015.

HONORS AND AWARDS

Marcus L. Urann Fellowship

The Honor Society of Phi Kappa Phi
2018, \$15,000

NISBRE Student Travel Award, National IDeA Symposium of Biomedical Research Excellence (NISBRE)
National Institute of General Medical Sciences, National Institutes of Health
2018, \$1,200

Senior Thesis Prize

Spring 2018 Honors Symposium, University of Nebraska at Omaha Honors Program
2018

Outstanding Undergraduate Research in Biomedical Sciences Award

Nebraska Academy of Sciences Annual Meeting, University of Nebraska Medical Center
2018, \$500

Bernie Kolasa Academic Freedom Scholarship

American Association of University Professors, University of Nebraska at Omaha Chapter
2018, \$1,000

Honorable Mention Undergraduate Oral Presentation

Annual Research and Creative Activity Fair, University of Nebraska at Omaha
2018, \$50

Outstanding Biotechnology Major

Biotechnology Faculty, Department of Biology, University of Nebraska at Omaha
2018

Barry M. Goldwater Scholarship

Barry M. Goldwater Scholarship and Excellence in Education Foundation
2017, \$7,500

C. Bertrand and Marian Othmer Schultz Collegiate Scholarship

Nebraska Academy of Sciences
2017, \$3,000

First Place Poster Presentation, Richard Holland Future Scientist Award

Annual NE-INBRE Conference, Nebraska Coalition for Lifesaving Cures
2017, \$700

HONORS AND AWARDS (continued)

Dr. Barbara Hayhome Memorial Undergraduate Scholarship

Department of Biology, University of Nebraska at Omaha
2017, \$750

Third Place Undergraduate Oral Presentation

Annual Research and Creative Activity Fair, University of Nebraska at Omaha
2017, \$75

Student Achievement Award

University Honors Program, University of Nebraska at Omaha
2017, \$500

Biology Department Travel Funds, National Conference on Undergraduate Research

Department of Biology, University of Nebraska at Omaha
2017, \$400

College of Arts & Sciences Travel Award, National Conference on Undergraduate Research

College of Arts & Sciences, University of Nebraska at Omaha
2017, \$180

NE STEM Officership

NE STEM 4U, University of Nebraska at Omaha
2017 - 2018, \$6,300

NE STEM Fellowship

NE STEM 4U, University of Nebraska at Omaha
2015 - 2017, \$3,000

Outstanding Leadership Award

University Honors Program, UNO
2015

University Committee on Research and Creative Activity Travel Award, Ecological Genomics Symposium

Office of Research and Creative Activity, University of Nebraska at Omaha
2015, \$310

College of Arts & Sciences Travel Award, Ecological Genomics Symposium

College of Arts & Sciences, University of Nebraska at Omaha
2015, \$195

Biology Department Travel Funds, Ecological Genomics Symposium

Department of Biology, University of Nebraska at Omaha
2015, \$185

Regents Scholarship

University of Nebraska Board of Regents
2014, \$32,000

TEACHING EXPERIENCE

Undergraduate Teaching Assistant

Principles of Biology (BIOL 1020), University of Nebraska at Omaha
2017 - 2018

Biology and Chemistry Tutor

Math Science Learning Center, University of Nebraska at Omaha
2015 - 2017

RELATED PROFESSIONAL EXPERIENCE

Curriculum Leader

NE STEM 4U, University of Nebraska at Omaha
2017 - 2018

K-8 Mentor

NE STEM 4U, University of Nebraska at Omaha
2015 - 2018

Technical Support Consultant

Information Technology Services, University of Nebraska at Omaha
2014 - 2016

ACADEMIC SERVICE

Director

Student Delegates, University of Nebraska at Omaha
2017 - 2018

Chief Justice

Student Court, University of Nebraska at Omaha
2017 - 2018

Student Services Committee Chair and College of Arts & Sciences Senator

Student Government, University of Nebraska at Omaha
2015 - 2017

Student Representative

Technology Resource and Services Committee, University of Nebraska at Omaha
2016 - 2017

Committee Member

Search Committee for the Library Dean, University of Nebraska at Omaha
2016

REFERENCES

Paul H. Davis, Ph.D.
Associate Professor
Department of Biology
University of Nebraska at Omaha
Allwine Hall 427
Omaha, NE 68182
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pdavis@unomaha.edu

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